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(54) **COLLECTION DEVICE**

SAMMELVORRICHTUNG

DISPOSITIF COLLECTEUR

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Description

Technical Field

[0001] The present invention relates to the area of exposure of bulk commodities in shop sections consisting of vertically piled containers containing the bulk commodities. The invention especially relates to a device for the collection of waste of commodity at such a container. The containers are especially suitable for self-service of confectionery and others sweets.

Background of the Invention

[0002] Confectionery and other sweets for self-service are usually exposed in shops by being visibly well placed in transparent containers, each kind in this way being exposed in an own container thereof. The containers are piled on each other in a rack, which enables that each container may be lifted out from the rack when refilling should be effected. The containers are formed with a pick part from which a customer may pick commodities by a lid being opened upwards. Certain types of commodities form rests that are stored in the bottom of the container, and therefore the containers have to be emptied in order to be kept fresh. At the emptying, the entire container is lifted out when it is empty of commodities, emptying being carried out. Thus, the container has to, on one hand, be empty of commodities and, on the other hand, be lifted out from the rack thereof and be emptied manually. This emptying operation is heavy to work considering that three to four containers are piled on each other up to a height of approx. 180 cm. Neither is the emptying operation particularly frequently occurring since the containers have to be empty. Therefore, emptying is only made in connection with and exactly before refilling of commodities to containers that have been almost or entirely emptied.

Object of the Invention

[0003] The object of the present invention is to solve the above-mentioned problems by providing a device with which a container of the type mentioned may be kept fresh by enabling removing of commodity rests irrespective of level of commodity in the container. Thereby, removing of commodity rests may be carried out directly after a refilling of commodities, which is extraordinarily suitable.

[0004] An additional object is that the device should be extremely easy to work and timesaving.

[0005] Furthermore, the object is that the device should interact with the container in order to obtain an optimum cleaning of the commodity rests.

Summary of the Invention

[0006] By the present invention, as this stands out in

the independent claim, the above-mentioned objects are met, said disadvantages having been eliminated. Suitable embodiments of the invention are given in the dependent claims.

[0007] A plurality of containers are piled on each other in a frame forming a shop module. A container according to the invention in such a shop module is formed with a groove-shaped bottom, which between the grooves is provided with bottom holes through which commodity rests may fall down. The holes are distributed in the container with a number of holes distributed on one hand horizontally but also longitudinally, i.e. along the curvature of the container from the top to the bottom. Preferably, the holes are formed in the shape of long slots that are curved in order to cover a larger surface in the direction of flow. Vertically below said holes, a collection device in the form of a waste box is placed. The waste box is transversally possible to pull out laterally in relation to the container in a space in the frame adapted for the waste box. The container is, in this connection, formed with integrated slide tracks in which the waste box is arranged to run.

[0008] Thus, emptying is carried out by the waste box simply being pulled out towards either of the sides of the shop module and then it is emptied and is pushed back in below the container.

[0009] An additional embodiment of the invention states that the waste box should be of a transparent material in order to enable a quick inspection before a possible emptying.

[0010] Additional embodiments may relate to snap functions for a form locking of the waste box in the inserted position and slide bars also on the waste box for a smooth manoeuvre and guiding in the slide tracks of the container.

[0011] Within the scope of the invention, embodiments according to which the container is provided with a closing device in the form of a damper for the bottom holes to be activated before the waste box is pulled out and emptied in order to avoid further waste of commodity are also found.

[0012] Further, each container is provided with a separate waste box arranged with identical design as other waste boxes.

Brief Description of the Drawings

[0013] The invention will now be closer described by means of embodiment examples, reference being made to the accompanying drawing figures, where

Figure 1 shows a schematic illustration of a first embodiment of a collection device for a container according to the invention.

Figure 2 shows a collection device according to the invention, pulled-out under a container.

Description of the Invention

[0014] Figure 1 shows a shop module 1 consisting of a frame 2 in which a number of containers 3 for commodities are mounted. Each container is provided with a pick part 5 provided with a lid 4 on the front side thereof as well as a refilling part 6 arranged on the back side thereof to which a refilling container 9 is connected. The interior of the container is provided with grooves 7 running in the direction of flow of the commodities along the container, see figure 2. Between the grooves, bottom holes 8 are arranged that enable waste of commodity to fall down from the container under the same in order to be caught in a waste box 10. Further, the container is provided with one or more dampers, not shown, which are displaceable across the bottom holes in order to either cover or uncover the same before the pulling-out of the waste box 10. The waste box is inserted into spaces below each container by a manoeuvring door 11 in the frame. Said spaces run from one side of the frame right across the frame to the other side thereof, whereby a waste box inserted in the manoeuvring door 11 may be pulled out sometimes from one side and sometimes from the other. The waste box shown in the embodiment according to figure 1 and figure 2 is provided with a rectangular opening that on the long sides thereof is provided with slide bars 12 and 13. Said slide bars run in the corresponding tracks in the frame between the manoeuvring doors 11. Furthermore, the waste box 10 is provided, on the two ends thereof, with a handle member 15 formed for facilitating manoeuvre. The waste box is formed with an opening that is larger than the extension of the holes 8 in order to enable a safe intercept of the waste of commodity. Preferably, the waste box is formed of a transparent material, preferably polypropylene plastic. Suitable commodities for this type of holes and collection vessels are, for instance, pralines of Swedish arrack punch being coated with granulated sugar. Granulated sugar that is applied to commodity surfaces in this way has a tendency to come loose at refilling of the commodities, this being regarded as a waste of commodity that falls down through the bottom of the container through the bottom holes arranged therein. By the fact that a waste box is arranged vertically below said bottom holes, the waste of commodity will be collected in the waste box as is clearly seen in figure 2. Also the pick of the consumer of loose sweets will lead waste of sweets to the waste box via the grooves.

[0015] The present invention is especially suitable for a shop module according to figure 1 that is arranged to be pulled out from other similar shop modules being mounted side by side in a shop section. This by virtue of the fact that the waste box may be manoeuvred from both sides of the respective shop module.

Claims

1. Collection device including a container (3), which is

provided with a pick part (5) arranged with a lid (4) for access of commodities placed in the container as well as a refilling part (6) arranged to enable refilling of the commodities, that the container (3) further is provided with a number of through bottom holes (8) as well as a detachable waste box (10) placed vertically below the bottom holes that enables a collection of waste of commodity falling down through the bottom holes (8), **characterized in that** the waste box (10) is able laterally transversally to be pulled out from a frame (2) in which the container (3) is placed.

2. Collection device according to claim 1, **characterized in that** the bottom of the container (3) is provided with grooves (7) running in the direction of flow of the commodities between which the bottom holes (8) are placed.
3. Collection device according to claim 2, **characterized in that** the waste box (10) is provided with slide members (12, 13) along the edges thereof in order to facilitate the motion of the waste box (10) out from the frame (2).
4. Collection device according to claim 3, **characterized in that** the container (3) is provided with a damper for closing of the bottom holes (8) in order to avoid waste of commodity when the waste box (10) is pulled out and emptied.
5. Collection device according to any one of claims 1-4, **characterized in that** the waste box (10) is formed of a transparent material.

Patentansprüche

1. Sammelvorrichtung mit einem Behälter (3), welcher einen Entnahmeabschnitt (5), der mit einem Deckel (4) für einen Zugriff auf in dem Behälter vorhandene Ware angeordnet ist, sowie einen Nach- oder Auffüllabschnitt (6) aufweist, welcher derart angeordnet ist, dass er das Nach- oder Auffüllen der Ware ermöglicht, wobei der Behälter (3) weiter eine Reihe von Boden-Durchgangslöchern (8) sowie ein senkrecht unter den Bodenlöchern angeordnetes abnehmbares Abfall- oder Überschussfach (10) aufweist, welches ein Auffangen oder Sammeln von überschüssiger Ware, welche durch die Bodenlöcher (8) fällt, ermöglicht, **dadurch gekennzeichnet, dass** es möglich ist, das Abfallfach (10) seitlich transversal aus einem Gestell (2), in welchem der Behälter (3) angeordnet ist, herauszuziehen.
2. Sammelvorrichtung nach Anspruch 1, **dadurch gekennzeichnet, dass** der Boden des Behälters (3) Rillen (7) aufweist, welche in Richtung des Waren-

Nachschubs verlaufen, wobei die Bodenlöcher (8) zwischen diesen Rillen angeordnet sind.

3. Sammelvorrichtung nach Anspruch 2, **dadurch gekennzeichnet, dass** das Abfall- oder Überschussfach (10) Gleitbauelemente (12, 13) entlang seiner Kanten aufweist, um die Bewegung des Abfall- oder Überschussfaches (10) aus dem Gestell (2) heraus zu erleichtern. 5
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4. Sammelvorrichtung nach Anspruch 3, **dadurch gekennzeichnet, dass** der Behälter (3) mit einer Klappe oder einem Schieber zum Verschließen der Bodenlöcher (8) versehen ist, um einen Verlust von Ware zu vermeiden, wenn das Abfall- oder Überschussfach (10) herausgezogen und geleert wird. 15
5. Sammelvorrichtung nach einem der Ansprüche 1 bis 4, **dadurch gekennzeichnet, dass** das Abfallfach (10) aus einem transparenten Werkstoff gebildet ist. 20

vendications 1 à 4, **caractérisé en ce que** la boîte à déchets (10) est fabriquée dans un matériau transparent.

Revendications

1. Dispositif collecteur comprenant un récipient (3), qui est pourvu d'une partie de sélection (5) munie d'un couvercle (4) pour accéder aux denrées placées dans le récipient, ainsi que d'une partie de remplissage (6) disposée de façon à permettre le remplissage des denrées, le récipient (3) étant en outre pourvu d'un certain nombre de trous de passage inférieurs (8) et d'une boîte à déchets détachable (10) placée verticalement en dessous des trous inférieurs qui permet de collecter les déchets de denrées tombant à travers les trous inférieurs (8), **caractérisé en ce que** la boîte à déchets (10) peut être retirée latéralement transversalement d'un châssis (2) dans lequel est disposé le récipient (3). 25
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2. Dispositif collecteur selon la revendication 1, **caractérisé en ce que** le fond du récipient (3) est pourvu de rainures (7) s'étendant dans le sens d'écoulement des denrées entre lesquelles sont disposés les trous inférieurs (8). 40
45
3. Dispositif collecteur selon la revendication 2, **caractérisé en ce que** la boîte à déchets (10) est pourvue d'éléments formant coulisse (12, 13) le long de ses bords afin de faciliter le retrait de la boîte à déchets (10) du châssis (2). 50
4. Dispositif collecteur selon la revendication 3, **caractérisé en ce que** le récipient (3) est pourvu d'un tiroir pour la fermeture des trous inférieurs (8) afin d'éviter la perte de denrées lorsque la boîte à déchets (10) est retirée et vidée. 55
5. Dispositif collecteur selon l'une quelconque des re-

Fig. 1

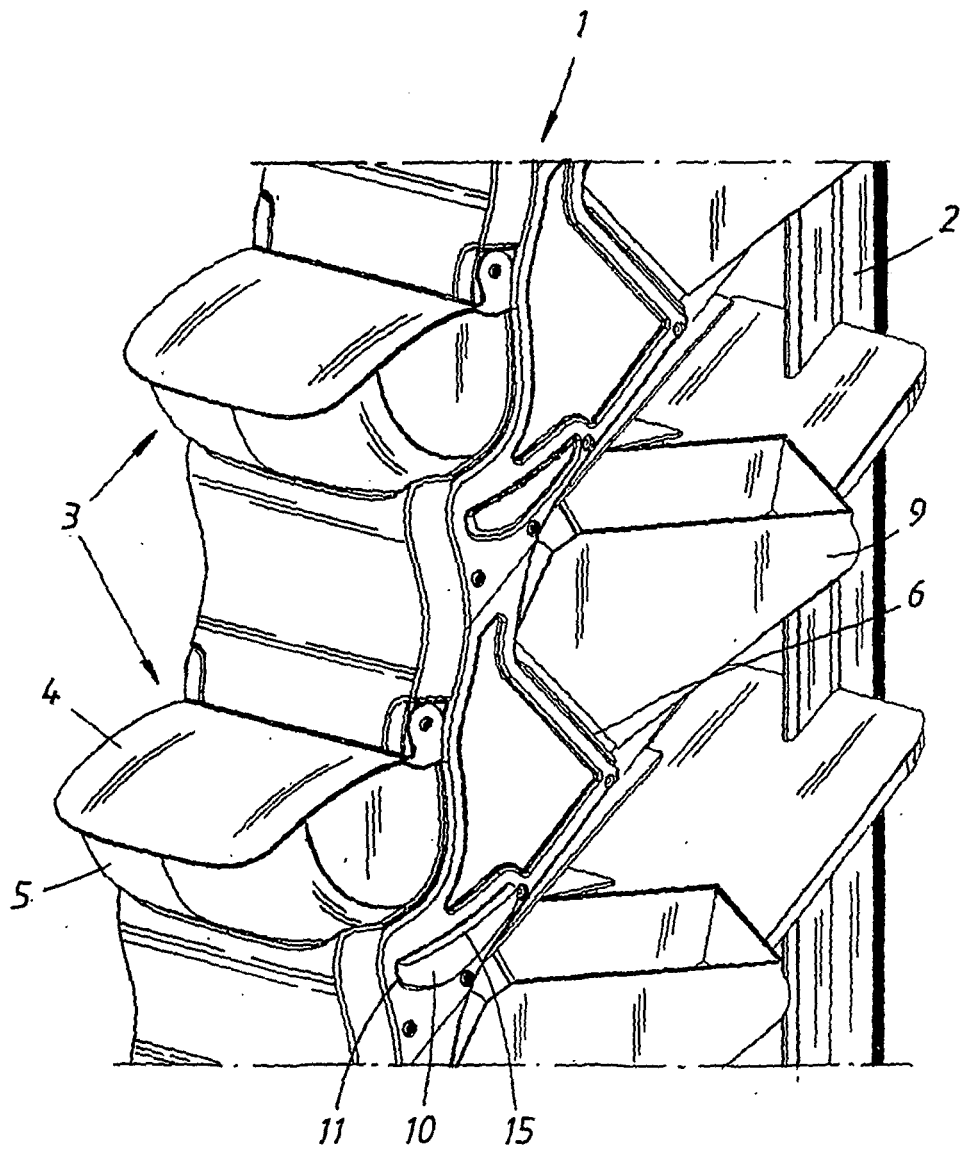


Fig. 2

